United Nations A/68/204

General Assembly

Distr.: General
26 July 2013

Original: English

Sixty-eighth session
Item 17 (d) of the provisional agenda*
Macroeconomic policy questions: commodities

World commodity trends and prospects

Report of the Secretary-General

Summary

The present report presents recent trends in commodity prices since the previous report, issued in July 2011 (A/66/207), and reviews the main international initiatives adopted to coordinate responses to excessive price volatility. It also provides a perspective on regional arrangements for creating physical grain reserves. Overall, the factors that contributed to high volatility of commodity prices were traditional supply and demand factors, although price volatility was exacerbated by the financialization of commodities. Low interest rates and loose monetary policy in major economies also contributed to high price volatility as commodities, such as gold, became higher-return assets relative to traditional investment instruments. The international community adopted a number of initiatives to address the negative effects of excessive price volatility in the agricultural, energy and metals markets.

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I. Introduction

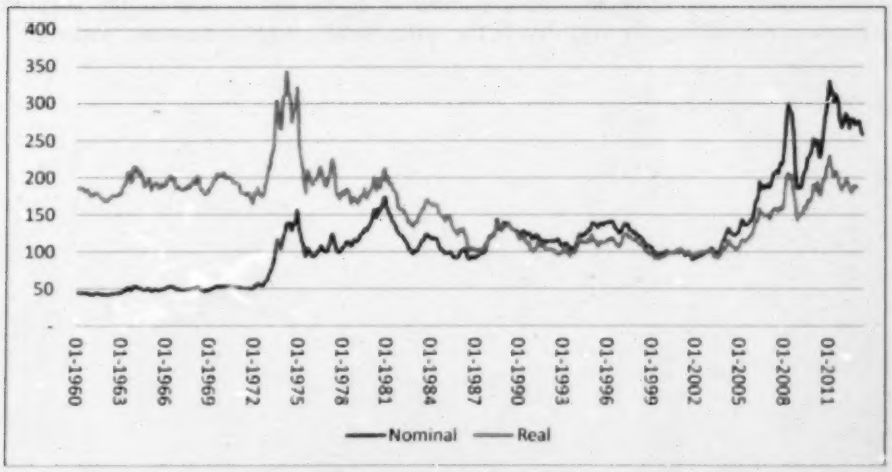
1. The present report discusses the main causes of commodity price volatility since the previous report, issued in July 2011 (A/66/207). It reviews the main international initiatives adopted to coordinate responses to excessive price volatility and provides a perspective on regional arrangements for creating physical grain reserves.

2. A year after the nominal peak prices in 2008, prices plunged across virtually all commodity groups, bringing an end to the commodity boom that had begun in 2002 (see figure I). Since the second quarter of 2009, prices have rebounded strongly, due mainly to a combination of factors, including robust demand from emerging economies, supply constraints from major exporters, and speculative trading.

3. In the food markets, reduced supply caused by adverse weather in major producing countries drove up the prices of major cereals in the summer of 2012. Despite geopolitical tensions in the Middle East, combined with the uncertainty of world economic outlook, the price of crude oil remained relatively stable, even though there was some short-term volatility. The metals market, in contrast, registered a downturn since the second quarter of 2012, on the one hand, due largely to the weakening demand from major consumers. On the other hand, in the last quarter of 2012, the prices of key base metals and gold surged sharply on the announcement of monetary easing by the central banks of major developed economies.

4. During the first five months of 2013, price trends diverged among different groups of commodities, but prices were less volatile than in the last quarter of 2012. In the base metals and oil markets, prices declined following a brief recovery in the first two months of 2013. The price of gold plunged owing to various factors, in particular worries over the slowdown of United States Federal Reserve asset purchase programme and the speculative selling by gold exchange-trade fund investors.

Figure I
Non-oil commodity price index, January 1960-May 2013
(2000=100)



Source: United Nations Conference on Trade and Development (UNCTAD), UNCTADstat.

5. The international community adopted a number of initiatives to address the negative effects of excessive food price volatility on vulnerable groups. They include the Agricultural Market Information System (AMIS), the High-level Task Force on the Global Food Security Crisis, the Global Agriculture and Food Security Programme and the Zero Hunger Challenge, a new vision on food security. In the energy market, efforts have been targeted at improving the Joint Oil Data Initiative (JODI-oil), and the creation of a similar initiative for gas, JODI-gas. Threats to food security in the aftermath of the 2008 food crisis have also revived interest in the constitution of regional grain reserves. The international community, including the United Nations Conference on Trade and Development (UNCTAD), and other stakeholders, could contribute actively to building consensus on the grain reserves in order to ensure that vulnerable groups are sufficiently catered to during severe shocks to food markets in the future.

II. Market developments in major commodity groups

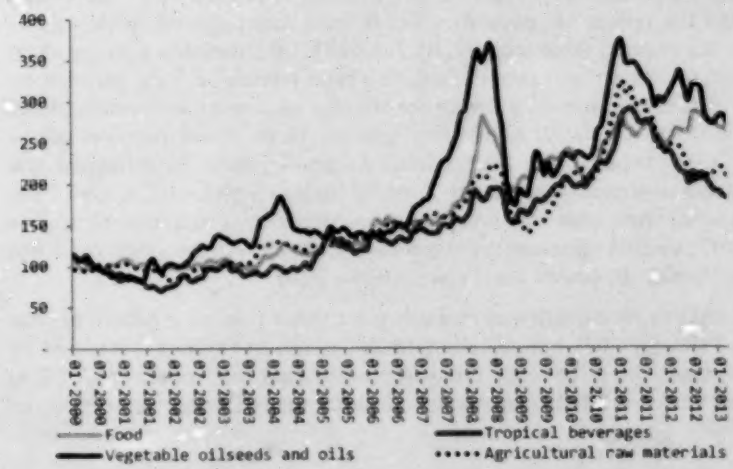
A. Agricultural and food crops

6. The UNCTAD all food commodity price index remained at historical heights since early 2011, despite short-term price fluctuations. By February 2011, the price index had surged to an all-time high of 292 points before trending downwards. In July 2012, driven by high prices of major cereals, the price index rose sharply to 283, only 9 points below its historical peak in 2008. It fell steadily to 253 in April 2013, 30 per cent higher than its 10-year average of 195 points.[1] Various subgroups of commodities exhibited different price patterns (see figure II).

Figure II

Price indices of selected food and agricultural commodity groups, January 2000-May 2013

(2000=100)



Source: UNCTAD, UNCTADstat.

[1] The 10-year average refers to the average price between May 2003 and April 2013.

7. The UNCTAD food price index fluctuated around an average of 265 points in 2011.[2] By December 2011, it had fallen to 248 points, a 15-month low, compared to February 2011. Led by high prices of maize, wheat and soybean meal, the price index surged to an all-time high of 286 points in July and August 2012. It then registered a steady decline, reaching 260 points in April 2013, as market fundamentals eased.

8. The maize and wheat markets were tight during the third quarter of 2012, owing mainly to supply disruptions and low stocks (see figure III). A severe drought in the United States of America reduced maize yield prospects, driving up that country's maize prices to a record high of $334 per ton in July 2012, from $270 in the previous month. Adverse weather conditions also affected the outlook for wheat production in the Russian Federation, Ukraine and Kazakhstan. Global maize stocks at the end of the 2012/13 season were expected to fall to a six-year low, and global wheat stocks to a four-year low.[3] The spike in major cereal prices raised concerns about food shortage in the net food-importing countries and revived the debate on using grains as feedstock to produce biofuels. During the first five months of 2013, maize and wheat prices retreated from their highs in 2012, as the global supply was forecast to recover, in particular in major producing countries. A rebound is expected for wheat production in the Black Sea region and Europe; and for maize in the United States.

9. International rice prices have been relatively stable since 2012, despite short-term price fluctuations. During the first five months of 2013, the benchmark Thailand rice prices averaged $564 per ton, 1.6 per cent lower than the corresponding period in 2012. Broadly balanced supply and demand, as well as a comfortable level of stocks, underpinned the rice price trend. The impact of Thailand's rice-pledging programme, a rice subsidy programme to support farmers, on the global rice market has been subdued to date. Looking forward, its impact on the availability and the prices of rice in the world market will in large part depend on the pace of the possible release of a large volume of public rice stocks.

10. Sugar prices were stable in the first quarter of 2012, averaging 24 cents per pound. However the expected production surplus, the appreciation of the United States dollar and the retreat of speculative funds from sugar futures market drove prices down in the ensuing three months. By June 2012, the monthly average sugar price had slipped to 20 cents per pound. Despite a brief rebound in July, prices were under downward pressure in the following ten months as a result of bearish global fundamentals outlook for the 2012/13 crop season. In its latest revision of the 2012/13 world sugar balance, the International Sugar Organization estimated that the global production surplus would reach a record high of 9.982 million tons.[4] The bearish market sentiments were reinforced as hedge funds have been net-short since mid-October 2012, betting on lower sugar prices. By May 2013, the sugar price had dropped to 17.62 cents, the lowest level since August 2010.

11. The UNCTAD vegetable oilseeds and oils price index reached a historical peak (374 points) in February 2011 before falling to 294 points in October 2011. Led by palm oil and soybean, the price index recovered in the first four months of 2012 to reach 337 points in April 2012. The rise of the price index during the summer of

[2] The UNCTAD covers wheat, maize, rice sugar, bovine meat, bananas, pepper, soybean meal and fishmeal.

[3] International Grains Council, Grain Market Report, No. 424, 26 July 2012.

[4] International Sugar Organization, Market Report and Press Summary (May 2013).

2012 was to a large extent driven by the surge of soybean prices, which rose by 21 per cent between June and August. Since September 2012, the price index has trended downwards, despite a brief rebound in the first two months of 2013. By April 2013 the price index had dropped to 260 points, a level that has not been seen since August 2010.

12. The soybean market was tight in the third quarter of 2012, owing to concerns about reduced supply in the United States caused by unfavourable weather, robust demand from Asia and low stocks. In August 2012, the benchmark United States soybean prices reached an all-time high of $684 per ton, an increase of 23 per cent, compared with the level in August 2011. Since the fourth quarter of 2012, the market tended to ease gradually. The average price of April and May 2013 was $496, compared to $592 in the first quarter of 2013 and $604 in the last quarter of 2012. The prospect of bumper soy crops in South America's major exporters, combined with weaker demand growth in China and the European Union and the retreat of major grain prices, underscored the price downturn.

13. The market for tropical beverages was bearish during the past two years, owing mainly to the significant decline of coffee and cocoa prices. Between May 2011 and May 2013, coffee and cocoa lost 39 and 24 per cent, respectively, of their value. The UNCTAD tropical beverages price index reached 290 points in April 2011, the second highest level following the historical record of 385 set in April 1977, before moving downward, with only a brief recovery in the third quarter of 2012.[5] By April and May 2013, the price index had dropped to 181, its lowest level since August 2009.

14. Coffee composite indicator prices fell steadily after reaching a high of 213 cents per pound in April 2011. By December 2012, the price had dropped to 128 cents. The sustained decline of the coffee composite indicator prices largely mirrored the price trends of Arabica coffee. Higher yield prospects in Brazil, the world's largest Arabica grower, combined with sluggish demand in traditional coffee-consuming countries, weighed on Arabica prices. In contrast, Robusta prices were relatively firm and stable, thanks to the strong demand in emerging markets where soluble coffee consumption is predominant.[6] During the first five months of 2013, the coffee composite indicator price was less volatile and rebounded slightly from its low in December 2012. However, it was still 19 per cent below its average value over the same period in 2012.

15. Following a bearish year in 2011, cocoa bean prices were relatively stable in 2012 (see figure III). In particular, during the first seven months of 2012, prices fluctuated within a narrow band ranging from 103 to 107 cents per pound. This resulted from the offsetting effects of an expected decline of production in West Africa and a sharp fall in cocoa grindings in Europe and North America, versus resilient demand growth in emerging markets. Prices recovered shortly in August and September owing to uncertainties surrounding supplies from Côte d'Ivoire, which started to reform its cocoa marketing system in early 2012. Since October 2012 the price rally discontinued, owing in part to the expectations of weak demand from the cocoa-processing industry. By March 2013 the cocoa price had dropped to 98 cents, the lowest level since December 2008.

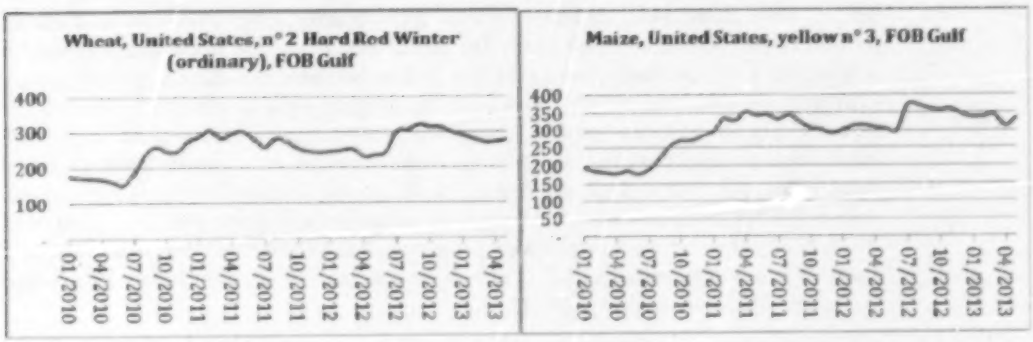
[5] The UNCTAD tropical beverages price index covers coffee, cocoa beans and tea.

[6] International Coffee Organization, Monthly Coffee Report (March 2013). According to the International Coffee Organization, coffee consumption in the emerging markets increased by 10 per cent from 2011 to 2012, while consumption in traditional markets declined by about 1 per cent.

16. The UNCTAD agricultural raw materials price index trended down after reaching a historical peak of 325 points in February 2011 (see figure II).[7] By August 2012 it had dropped to 200 points, a 33-month low. The price index rebounded in the following months to reach 220 points in February 2013, mainly driven by higher prices of rubber, tropical logs and cotton. However, owing in large measure to the sharp decline of rubber prices, the price index fell to 203 points in April and May 2013, a level close to its low in August 2012.

17. The cotton market was highly volatile in 2011 (see figure III). The cotton outlook index A had plunged to 95 cents per pound by December 2011, 59 per cent below its all-time high in March 2011. Despite a short recovery in early 2012, prices fell again in the second quarter of 2012, owing mainly to supply surplus, the expected surge in global stocks and renewed concerns over the Eurozone economy. The 2012/13 season was marked by lower volatility, owing in part to China's large State cotton reserve.[8] During the second half of 2012, prices were stable, averaging 83 cents per pound, which is well above the long-term average of 72 cents.[9] In March 2013, the monthly average price rose to 94 cents, the highest price thus far in 2012/13. This may mirror concerns about a tightening supply and demand balance outside of China.

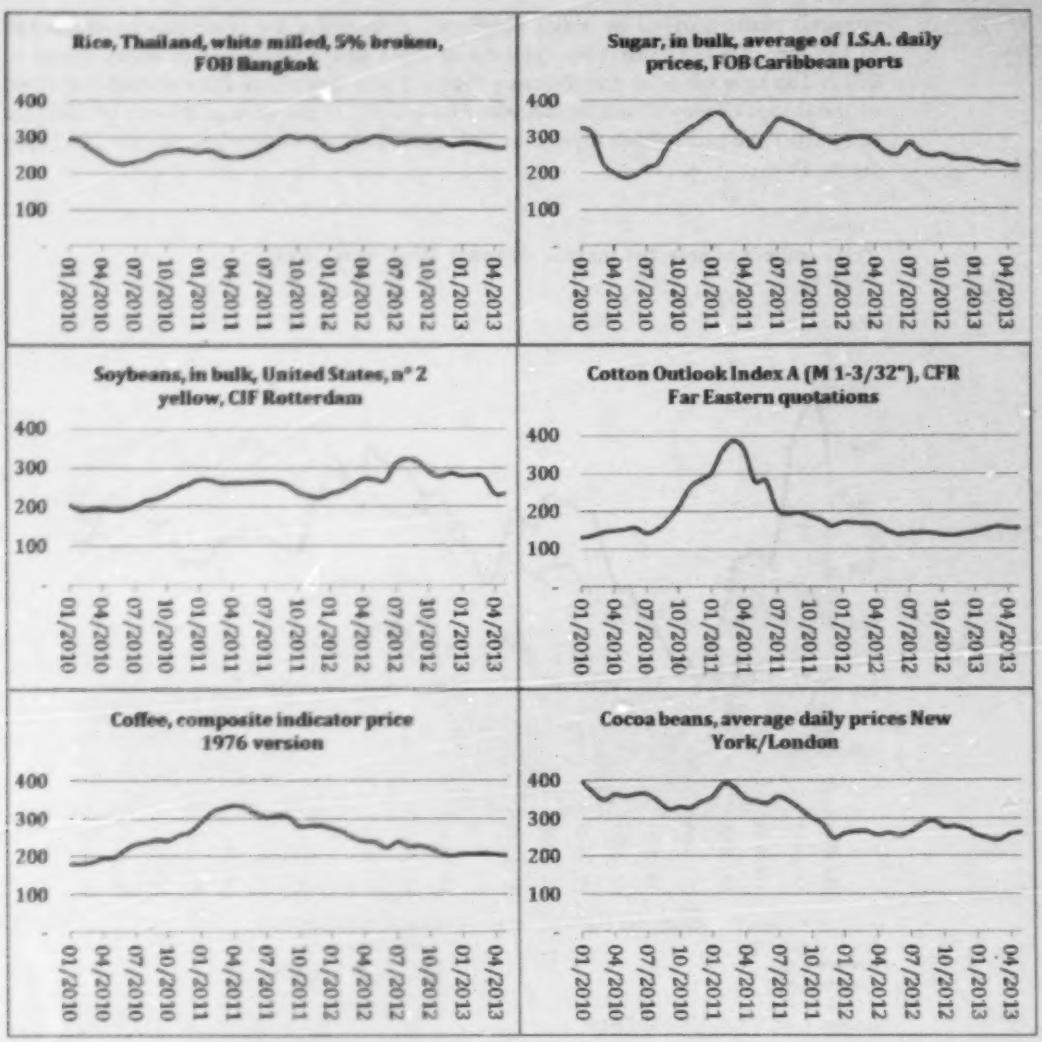
Figure III
Main agricultural commodity price indices, January 2010-May 2013
(2000=100)



[7] The UNCTAD agricultural raw materials price index covers cotton, tobacco, tropical logs, rubber, wool, jute, sisal, hides and skins, and linseed oil.

[8] China's national cotton reserve is estimated at close to 9 million tons as at the end of June 2013, accounting for about 50 per cent of the global ending stocks in 2012/13. China is projected to hold close to 60 per cent of the global stocks by the end of 2013/14. See the International Cotton Advisory Committee press release, 1 July 2013.

[9] The long-term average refers to the average price of cotton from January 1974 to May 2013.



Source: UNCTAD, UNCTADstat.

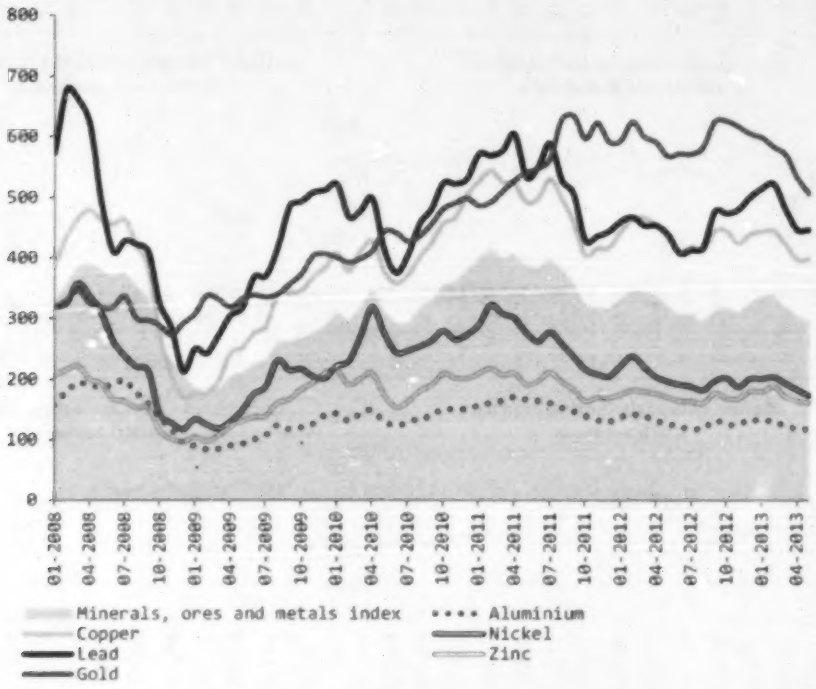
B. Minerals, ores and metals

18. After setting a historical record of 418 points in February 2011, the UNCTAD minerals, ores and metals price index registered a remarkable downturn in the second half of 2011, hitting 317 points in December 2011.[10] During the first two months of 2012, the price index rebounded before receding in the next few months, owing mainly to worsening global economic prospects. In August 2012, the price index hit its two-year low of 296 points. Subsequently, as a result of monetary

[10] The UNCTAD minerals, ores and metals price index covers copper, aluminium, iron ore, nickel, lead, zinc, tin, phosphate rock, manganese ore, and tungsten ore. Gold is not included in the price index.

stimulus plans adopted by major developed economies, the price index rose to 318 in October 2012. The first five months of 2013 saw a similar price trajectory as in 2012. The upward price trend during the first two months of 2013 quickly reversed as the prices of major base metals and iron ore fell in the second quarter of 2013. In May 2013 the price index dipped to 297, close to the low level of August 2012 (see figure IV).

Figure IV
Price indices of selected metals, January 2008-May 2013
(2000=100)



Source: UNCTAD, UNCTADstat.

19. Copper prices rallied in late 2011 and during the first quarter of 2012, driven by strong growth in Chinese copper demand (partly for stockpiling), as well as abundant liquidity in financial markets. By March 2012 the monthly average price had risen to $8,457 per ton, 15 per cent higher than its low in October 2011. However, the price trend reversed in the second quarter of 2012, owing to slowing growth of industrial activities in China and a deteriorating situation in the Eurozone. Relatively stable prices in July and August were followed by a strong price surge (+7.7%) in September 2012, as market participants responded to the monetary easing in the United States, Eurozone and Japan. In late 2012 and early 2013 the copper market was optimistic on the prospects of economic recovery in the United States and China. Prices rose to $8,070 in February 2013 before dropping to $7,203 in April 2013, a level that had not been reached since August 2010. Lower-than-expected growth outlook in major copper-consuming countries, a supply surplus and rising stockpiles contributed to the price correction. According to the International

Copper Study Group, refined copper production is expected to exceed demand in 2013 after three years of consecutive deficits.

20. Aluminium, nickel, lead and zinc exhibited similar price trends as that relating to copper. The recent economic slowdown in China, the weak pace of recovery in the United States and the uncertainty over the economic outlook in the Eurozone have been weighing on the metal prices. Furthermore, the supply surplus in recent years put downward pressure on the prices. The average prices from January to May over the period 2011-2013 steadily declined for aluminium, nickel and zinc, the decline being particularly pronounced for aluminium and nickel, as the average prices during the first five months of 2013 fell below their five-year averages.[11] The price of nickel, a crucial raw material used in the production of stainless steel, hit a four-year low in May 2013. Chronic oversupply, high stocks and weakened demand drove the aluminium price down to $1,830 per ton in May 2013, the lowest level since August 2009.

21. The year 2011 was marked by record high and volatile prices of iron ore, the raw material used for steelmaking. The International Monetary Fund (IMF) iron ore price index averaged 597 points with an all-time high of 666 points registered in February 2011. However, in late 2011, the price index lost 28 per cent from its high in February 2011. The relatively stable prices during the first four months of 2012 were followed by a steady decline in the following five months. The downward price movement can mainly be attributed to high stockpiles, shrinking demand for steel by China's construction and manufacturing industries, and sufficient supply. Since October 2012 prices have rebounded sharply to reach $155 per dry ton in February 2013, 57 per cent higher than its low in September 2012. Restocking by Chinese steelmakers, disruptions in iron ore production and shipments owing to unfavourable weather conditions and an export ban in India contributed to the price surge. However concerns over China's slowing economic growth and subdued steel demand, combined with expectation of rising iron ore supply drove prices down to $124 in May 2013, losing 20 per cent relative to the price in February 2013.

22. The gold price has been highly volatile since 2011. After rallying for eight months, the monthly average gold price surged to an all-time high of $1,772 per troy ounce in September 2011. In the second quarter of 2012, the price averaged $1,611, sliding from its February high of $1,743, mainly as a result of weaker demand both from the jewellery industry and from investment, which together represent over 70 per cent of global gold demand. The price quickly recovered and hit a 13-month high in October 2012 as expansionary monetary policies in major developed economies renewed inflationary concerns. However, since November 2012, the gold market has experienced seven months of straight decline. In May 2013, the price hit $1,414, down 19 per cent from its value in October 2012, although still higher than its five-year average ($1,315).[12] The steep fall in prices can be explained by multiple factors such as expectations of slowdown in the pace of quantitative easing in the United States, speculation that crisis-hit Eurozone countries would be forced to sell gold reserves, lower inflation expectations (in particular in the United States and Europe), rally in equity markets of developed countries and the liquidation of gold exchange-trade funds. According to the World Gold Council, gold demand in the first quarter of 2013 was down 13 per cent year-on-year as substantial net

[11] The five-year average refers to the average price from June 2008 to May 2013.

[12] The five-year average refers to the average price of gold from June 2008 to May 2013.

outflows from gold exchange-trade funds outweighed the strong growth in consumer demand for gold jewellery, bars and coins.[13]

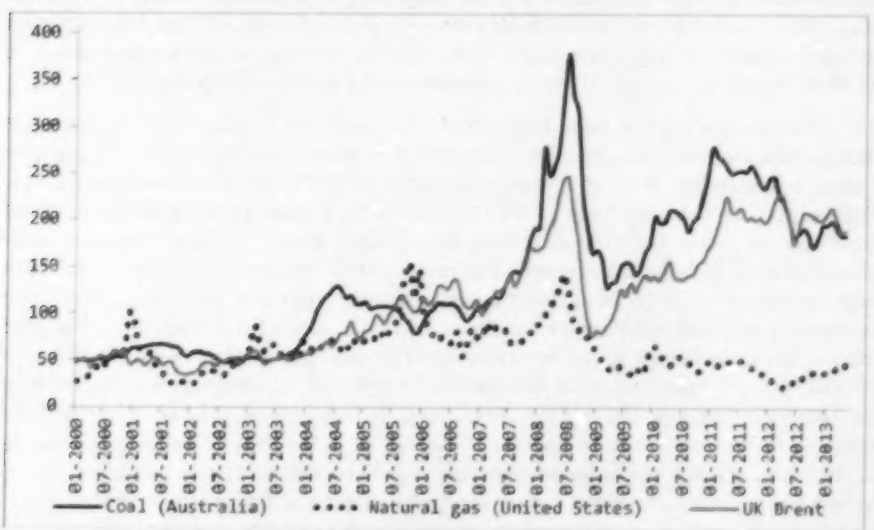
C. Energy

Crude oil

23. Despite geopolitical tensions in the Middle East and elsewhere, world oil production registered a remarkable growth in 2012. Total oil supply increased by 2.8 per cent, in large measure as a result of the substantial increase in the production of the Organization of the Petroleum Exporting Countries (OPEC). Among non-OPEC countries, the most important supply growth came from the United States, where the advances in shale technology has led to rising light tight oil production. In 2012, United States oil supply rose to 9.2 mb/d, up 12.8 per cent from 2011 and is expected to increase by 9.2 per cent in 2013. In the first quarter of 2013, world oil production was estimated at 90.8 mb/d, 0.7 per cent lower than the last quarter of 2012.

24. Oil prices remained high since 2011. The spot prices for the world's most widely quoted benchmark Brent oil averaged $112 per barrel in 2012, close to the 2011 average of $111. In March 2012, the Brent oil price surged to $125, only 7 per cent lower than the historical peak set in July 2008. During the first five months of 2013 prices averaged $109 (see figure V).

Figure V
Price indices of crude oil, natural gas and coal, January 2000-May 2013
(2005=100)



Source: International Monetary Fund, International Financial Statistics.

[13] World Gold Council, Gold Demand Trends: first quarter 2013 (May 2013).

25. Having registered relatively stable prices in the second half of 2011, oil prices became more volatile during the first eight months of 2012. Rising geopolitical tensions in the Middle East, intensified speculative activities in the oil derivatives markets, combined with other supply-side constraints (i.e. technical outages in the North Sea) resulted in the surge of oil prices in the first quarter of 2012. In particular, threats by the Islamic Republic of Iran to close the Strait of Hormuz in response to bans placed by the European Union and the United States on its crude exports raised concerns about supply disruptions.

26. However, in the second quarter of 2012, crude prices reversed their upward trajectory. Brent oil prices dropped sharply to an 18-month low in June 2012, down 23 per cent from its high in March 2012. Concerns over oil consumption, increased OPEC supply and rising Organization for Economic Cooperation and Development (OECD) crude stocks contributed to the plunge in oil prices. Disappointing economic data from Europe, the United States and China depressed prices. Despite initial concerns about supply tightening, global oil supplies increased, compared with 2011, owing mostly to the substantial production increase by OPEC. The decline in Iranian crude supply was more than offset by increased production from Libya, Saudi Arabia and Iraq.

27. By the end of June 2012, concerns about supply disruptions re-emerged with renewed tensions in the Middle East. July and August 2012 also witnessed a sharp drawdown on crude inventories in response to the steep increase in OECD refinery demand. Furthermore, financial investors increased their net long positions — betting on rising oil prices — in crude oil futures markets. As a result, Brent crude prices rebounded sharply in July and August 2012 before stabilizing in the following months.

28. During the first two months of 2013, oil prices rebounded again in the context of financial markets rally. The avoidance of the fiscal cliff in the United States and the positive economic data from major oil-consuming countries restored confidence in global economic growth and oil demand. Optimistic market sentiment, combined with rising geopolitical risks (e.g. the January 2013 terrorist attack on an Algerian gas facility) also boosted speculative buying in the oil futures market. The price for Brent oil edged up to $116 per barrel in February 2013. However, the upward momentum was reversed in the following months with Brent crude falling to $103 per barrel in April and May 2013. Various bearish factors depressed oil prices: weaker-than-expected economic data from China and the United States; the prolonged Eurozone economic crisis; seasonal lower oil demand owing to refinery maintenance; higher crude production; and the strengthening of the United States dollar.

Natural gas

29. Owing to dissimilar pricing mechanisms, the prices of natural gas vary considerably between different regions. Asia witnessed the highest gas prices, as prices are set mainly by long-term contracts linked to oil prices. In the United States, prices are determined by market fundamentals. The shale gas revolution boosted gas supply in the United States market and exerted downward pressure on gas prices. In Europe, the traditional long-term take-or-pay contracts that guarantee minimum purchase of gas indexed to oil prices have been challenged in recent years as more European buyers opted for supply-and-demand-based gas pricing. According to the International Energy Agency, the spread between United States

benchmark Henry Hub gas prices and Japanese imports reached a record average price difference of $16 per million British thermal units in mid-2012.[14]

30. The United States gas market was marked by low gas prices in 2012, in particular for the first three quarters (see figure V). The average price for the year was $2.75 per million British thermal units, 31 per cent lower than the price in 2011, and 43 per cent lower than the five-year average (2008-2012). In April 2012, the price dropped further to $1.95, a level that was last seen almost 13 years ago. The sharp decline in gas prices was due, in large measure, to the recent surge in shale gas production, a warmer winter and record-high stockpiles. United States Energy Information Administration (EIA) data showed that storage levels were 2,479 billion cubic feet for the week ending 30 March, more than 60 per cent above the five-year average for that week.[15] During the first five months of 2013, with improved market fundamentals, prices recovered to $3.73, compared to $2.35 during the same period in 2012. In March 2013, the gas price surged to $3.80, 14 per cent above the February level. A higher demand, owing to colder weather, a tighter supply-and-demand balance and reduced stock levels, helped to lift gas prices. According to EIA, in the last week of March, natural gas storage fell below its five-year average for this time of year.

31. One of the important impacts of low gas prices in the United States is the displacement of coal by natural gas for power generation. In April 2012, for the first time, natural gas and coal achieved an equal share in electric power generation. With rising gas prices in 2013, the share of natural gas in total generation fell below the record levels of April 2012. Despite the recovery of coal's share, EIA expected that coal power plants would in average account for 40.1 per cent of total generation in both 2013 and 2014, well below the typical coal share ranging from 48 per cent to 51 per cent registered between 2001 and 2008.[16]

Coal

32. The year 2011 was marked by high prices of thermal coal, the major fuel for electricity generation. In January 2011, the Australian Newcastle thermal coal spot price, the benchmark for the Asia market, surged to $142 per ton, the highest monthly average since the outbreak of the financial crisis in 2008. In contrast, the thermal coal market was depressed through most of 2012 with the price averaging $103, 21 per cent below its 2011 average. Since March 2012 the coal price fell steadily, reaching $93 per ton in June. Despite a slight recovery in the third quarter of 2012, the price dipped to $88 in October 2012, a 35-month low.

33. The fall of the thermal coal price was to a great degree attributed to ample supply and weak import demand. In China, the world's top thermal coal importer, the deceleration of economic growth in 2012 led to a significant slowdown in coal-fired power generation, thus curbing the demand for thermal coal. In the United States, the switch to cleaner and lower cost natural gas effectively reduced domestic demand for thermal coal. As a result, the thermal coal exports from the United States increased by 53 per cent during the first half of 2012 with exports to Asia

[14] OECD/International Energy Agency, *Medium-Term Gas Market Report 2013: Market Trends and Projections to 2018* (Paris, 2013).

[15] See www.eia.gov/todayinenergy/detail.cfm?id=5910#tabs_NatGasPrices-1.

[16] Energy Information Administration, Short-Term Energy Outlook (July 2013).

rising by 29 per cent, compared with the corresponding period in 2011.[17] This exerted downward pressure on coal prices in the well-supplied Asia market.

34. Since November 2012, coal prices rebounded to reach $102 in February 2013, owing partly to rising seasonal demand and supply disruptions in Australia caused by floods. However, the decline trend reappeared since March 2013 mainly as a result of subdued demand and rising supply.

III. Commodity price and market volatility: coordinated policy responses

A. Causes of excessive commodity price volatility

35. "Day-to-day" price fluctuations in commodity markets are attributes of normally functioning markets. Excessive volatility is observed when price variations surpass some "normal" threshold for some relatively long time. For example, the standard deviation of the prices of wheat, maize, rice and soybeans over the period from 1980 to 2012 (excluding the year 2008) were 15.5 for wheat, 11.4 for maize, 21.8 for rice and 24.5 for soybeans. In 2008 alone, standard deviations in prices were 67.5 for wheat; 37.0 for maize; 185.8 for rice and 89.9 for soybeans.[18] This was an example of excessive price volatility which hurt consumers and producers, particularly in food-importing developing countries. As the charts in the previous section illustrate, excessive volatility has been combined with relatively high prices in the past five years.

36. Several factors explain the high volatility in commodity markets and prices, including demand-side and supply-side determinants as well as macroeconomic policy variables. The magnitude of the price hikes and volatility in commodity markets and their causes have been discussed at length elsewhere, including in the previous report on world commodity trends and prospects, submitted in 2011 (A/66/207).

37. On the demand-side, global population growth and changing dietary patterns among the rising middleclass in emerging economies have not only exerted upward pressure on food commodity prices, but also created instability in food markets that have had to adjust to these new trends. As discussed in detail in the 2011 *World commodity trends and prospects* report, excessive speculative activities in the commodities sector have also continued to weigh in on price volatility, given the unpredictable nature of fund managers' decisions, solely driven by short-term profits.[19] From $15 billion in 2003, speculative investment in commodity indices was estimated to have increased to $451 billion by April 2013.

38. Some countries have taken steps to address this thorny issue. In 2011, for example, the Dodd-Frank Wall Street Reform and Consumer Protection Act directed the United States Commodity Futures Trading Commission to limit the size of speculators' positions in commodity derivatives markets. The European Union is

[17] Energy Information Administration, Quarterly Coal Report (April-June 2012).

[18] Calculated based on UNCTAD Statistics database.

[19] Institute for Agricultural and Trade Policy, "Excessive speculation in agricultural commodities: selected writings from 2008-2011".

also reforming its futures markets to enforce speculative positions and reporting requirements in order to promote transparency in the markets.

39. On the supply side, traditional factors, such as changing weather patterns, have been associated with high food price volatility. In 2012, for example, the worst drought in the United States since the 1930s sent corn and soybean prices to record highs in the second half of 2012. The commodity price boom since 2002 has also been underpinned by supply constraints resulting mainly from underinvestment over the past two decades in both the agricultural and extractive sectors. In addition, uncertainty has been heightened by the recent diversion of food for biofuels and trade policy measures such as export restrictions that have been used by a number of countries in the past few years.

40. In the energy sector, high and volatile oil prices have partly resulted from geopolitical factors, such as the fear of political instability (e.g. high tension in North Africa and the Middle East, particularly the threat to block the Strait of Hormuz, where about 20 per cent of all oil traded worldwide is located), which may disrupt production and shipment of oil in major oil-exporting countries. Production cut threats by OPEC also contributed to oil price volatility. In addition, the increasing linkages between energy (oil, gas, and agrochemicals) and agricultural markets (maize, wheat, and soybean) have created a system whereby a shock to one product affects the other products, generating more instability.

41. Macroeconomic policies in major economies have also played an important role in fuelling excessive commodity price volatility. For example, the depreciation of the United States dollar has prompted currency investors to switch to exchange-traded funds and notes with short maturity, generating commodity price volatility. Price instability has also resulted from low interest rates and loose monetary policy adopted by major central banks over the past five years. The uncertainty over future monetary policy has contributed to perpetuating the problem of price instability. In addition, trade-distorting policies, including export restrictions used by a number of producing countries, have fuelled hoarding and panic-buying, increasing volatility in commodities markets.

B. Addressing excessive commodity price volatility through coordinated international efforts

42. The high price level and excessive volatility of commodities have constituted a major threat to development efforts, particularly in low income, net food-importing developing countries, where as much as 70 per cent of household expenditure is on food.[20] The international community called upon international commodities organizations and relevant international organizations to strengthen their coordination in their common quest for finding solutions to the issue of excessive

[20] The household expenditure on food as a percentage of total expenditure in selected countries is 58.7 in India, 60.6 in Indonesia, 74.8 in Kenya, 54.7 in Papua New Guinea and 81.6 in Rwanda. Data from: L. C. Smith, A. Subandoro, *Measuring Food Security Using Household Expenditure Surveys* (Washington, D.C., IFPRI, 2007), tables 7 and 8, pp. 76 and 77.

commodity price volatility.[21] Several initiatives, briefly reviewed below, have been established at the international level.

43. The Agricultural Market Information System (AMIS) was established at the initiative of the G20 in the wake of the 2008 food crisis in order to improve market information and transparency. At its November 2010 summit in Seoul, the G20 adopted the Seoul Summit Document which, among other things, invited relevant international organizations to prepare proposals on policy responses to excessive price volatility in food and agricultural markets.[22] To this effect, a report prepared by the Food and Agriculture Organization of the United Nations (FAO), the International Fund for Agriculture Development (IFAD), IMF, OECD, UNCTAD, World Food Programme (WFP), the World Bank, the World Trade Organization (WTO), the International Food Policy Research Institute (IFPRI) and the United Nations High-level Task Force on the Global Food Security Crisis, was presented to the G20 ministers of agriculture in June 2011 in Paris. One of its recommendations was to establish AMIS, which would involve collaborative efforts from all relevant international institutions in order to improve agricultural and food data reliability and timeliness, while ensuring enhanced policy coordination during food crises. This recommendation was endorsed by the G20 and AMIS was launched on 15 September 2011 in Rome.

44. AMIS is fast becoming a major source of global public data on food markets. Through its focal points in participating countries, AMIS collects data on four major food commodities: wheat, maize, rice and soybeans. Data on production, supply, utilization, trade, ending stocks, and prices as well as forecasts, are analysed, consolidated and published through the AMIS monthly monitor to make it available to the wider public. It is expected that this will limit speculation and panic-buying of the four crops and help to stabilize their prices. Although there is no hard evidence, access to market data might have averted another food crisis in 2012 as commodities market actors noted the existence of better market fundamentals than in 2008.

45. The High-level Task Force on the Global Food Security Crisis was also established in reaction to the 2008 food crisis in April 2008 by the United Nations Secretary-General. It brings together 23 institutions, including United Nations specialized agencies, funds and programmes, as well as parts of the United Nations Secretariat, the World Bank, IMF, OECD and WTO. Its main objective was to prepare a comprehensive and concerted plan of action in response to the challenge of achieving food security for all. The plan was produced in September 2010 in the form of an updated comprehensive framework for action. It outlined policies and actions aimed at responding to the immediate needs of food deficient countries such as the provision of food assistance and social safety nets. The framework also offered a menu of policies to address long-term and structural issues such as the need to invest in developing countries' agriculture in order to avert future food crises. Furthermore, the framework puts forward a number of actions relevant to

[21] For example, the G20 Seoul Summit endorsed the Multi-Year Action Plan on Development, in November 2012, to address, among other pressing issues, food price volatility.

[22] FAO and OECD, "Price volatility in food and agricultural markets: policy responses", policy report including contributions by FAO, IFAD, OECD, UNCTAD, WFP, the World Bank, WTO, IFPRI and the United Nations High-level Task Force (2 June 2011).

particular needs of the populations that are most vulnerable to the negative effects of food crises.[23]

46. The High-level Task Force has contributed to galvanizing action by the international community around the need to find solutions to the scourge of food insecurity. The scaling-up of resources and better coordination among stakeholders have been two overriding objectives of the High-level Task Force. A recent evaluation of its work[24] noted with satisfaction that it has been able to adapt to the changing nature of the challenge of food insecurity over the past five years. It was able to move from its original narrow focus on food prices to a broader understanding of the complexity of food and nutrition security. Overall, the High-level Task Force has been credited with success in efficiently coordinating a large number of stakeholders while providing good value. Had the Task Force had not been created and worked successfully, approaches to attaining food and nutrition security would have remained fragmented and their response would have been significantly less efficient.

47. The Global Agriculture and Food Security Programme is a multilateral mechanism designed to assist in the implementation of pledges made by the G20 in Pittsburgh in September 2009 and to contribute to the achievement of Millennium Development Goal 1 to cut hunger and poverty by half by 2015. Its main objective is to address the underfunding of country and regional agriculture and food security strategic investment plans already being developed by countries in consultation with donors and other stakeholders at the country level. It has public and private sector financing windows, with the former devoted to assisting strategic country-led or regional programmes that result from sector-wide country or regional consultations and planning exercises, such as the Comprehensive Africa Agriculture Development Programme in Africa. The private sector window is designed to provide long and short-term loans, credit guarantees and equity to support private sector activities for improving agricultural development and food security. As at end-May 2013 donors had contributed approximately $959.8 million, amounting to about 70 per cent of the total pledge of $1.3 billion made to both windows.[25]

48. The Zero Hunger Challenge is a new vision about food security established in 2012. It revolves around the principle that hunger can be eliminated in our lifetime. It is a collaboration effort between several United Nations and non-United Nations agencies that share the objective of eradicating hunger in the world. The Challenge has five goals that direct its efforts towards achieving its overall objective. They are: 100 per cent access to adequate food all year round; zero stunted children less than 2 years old; sustainability of all food systems; 100 per cent increase in smallholder productivity and income; and zero loss or waste of food.[26]

49. In order to reduce price volatility in the oil and gas sector, the main objective of the international community, mainly through initiatives by the G20, has been to make markets more transparent and hence, predictable and stable. Efforts have centred on the ways to improve the Joint Oil Data Initiative (JODI), established in 2000 to increase information availability about oil markets, with the understanding that greater transparency will facilitate market stability. Recently, the G20 Energy

[23] See www.un.org/en/issues/food/taskforce/background.shtml.

[24] See http://un-foodsecurity.org/sites/default/files/HLTF_Final%20Report_Volume%20I.pdf.

[25] For further details, see www.gafspfund.org/content/about-gafsp.

[26] See http://un-foodsecurity.org/sites/default/files/EN_ZeroHungerChallenge.pdf.

Sustainability Working Group has been actively discussing possible improvements to the Initiative. One area identified for possible improvement is ensuring availability and comparability of relevant data on physical and financial markets. In this respect, it is important that the International Energy Agency, the International Energy Forum and OPEC combine expertise and experience to actively work together to propose possible measures that could be taken to increase transparency in the energy market. Hence, more work is needed, particularly at the operational level, before the issue of excess volatility in the oil sector can be properly addressed.

50. The relative success of JODI has prompted calls to extend it to natural gas, in order to increase transparency in the gas sector. This idea has been well received by stakeholders, including the United Nations. Hence, the second gas data transparency conference held in May 2012 in Doha formally recommended the creation of JODI-gas. This issue has been taken up by the G20 and it has been on the agenda of recent G20 Energy Sustainability Working Group discussions. According to the International Energy Forum, a beta version of the JODI-gas database was launched on 16 January 2013; the public launch of JODI-gas is scheduled for late 2013.[27]

C. Regional arrangements for creating physical grain reserves[28]

51. The 2008 food crisis exposed weaknesses in the international food system that disproportionately threaten the world's poor. Observers suggested then that attention be refocused attention on grain food reserves to address this crisis and avoid future similar situations. Grain reserves' main aims are to: (a) stock essential food grains that will be used to feed vulnerable populations during times of acute crisis; (b) smooth consumption by improving the distribution of food grains across time and space; and (c) stabilize prices through direct purchasing and selling of grain to prevent volatility and price extremes.

52. The first two objectives are viewed as responding to emergency supply purposes, whereas the latter addresses the issue of extreme price volatility. Despite the many past instances where grain reserves were unable to significantly affect price levels, they remain relevant as instruments used to prevent and/or better cope with future food crises. The general arguments may be framed as follows:

(a) Food security strategies based on spot transactions on the market instead of physical reserves may be cheaper and more flexible to operate during good times but they were unsustainable for Governments with limited resources during a period of crisis;[29]

(b) Since it is impossible to guarantee that major food exporting countries will continue exporting during future crises, any multinational physical grain stocks must include ownership and location provisions that guarantee access to import-dependent countries;

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[27] See www.jodigas.org/update-on-jodi-gas-05-june-2013-web.pdf.

[28] This section is based on UNCTAD, *Commodities and Development Report. Perennial Problems New Challenges and Evolving Perspectives* (2013).

[29] C. Peter Timmer, "Reflections on food crises past", *Food Policy*, vol. 35, No. 1 (2010), pp. 1-11.

(c) Regional specificities and logistical constraints imply that regional bodies provide the most cost-effective, responsive management of these multinational grain reserves.

53. Some initiatives are under way to establish regional physical grain reserves. The Association of Southeast Asian Nations (ASEAN) Emergency Rice Reserve has been in place since 1979. In October 2011, ASEAN agreed on a new, strengthened version of the reserve, called the ASEAN-Plus-Three Emergency Rice Reserve.[30] The size, funding and coverage of the reserve were significantly expanded by the addition of China, Japan and the Republic of Korea. The size of the reserve was increased almost tenfold to 787,000 tons. It comprised the existing 87,000 tons from the ASEAN Emergency Rice Reserve, plus 300,000 tons from China, 250,000 tons from Japan and 150,000 tons from the Republic of Korea. In addition, it was decided that the reserve would be managed and owned regionally, instead of by member States, and would be stored in China, Japan, the Republic of Korea and the ASEAN countries, and would be dependent on food import needs. The objectives of the ASEAN-Plus-Three Emergency Rice Reserve were also revised: from a simple emergency reserve, it added the more ambitious objective of acting as a tool for stabilizing rice prices in the region.[31]

54. A similar initiative is the Latin America and Caribbean Emergency Response Network, but its mandate is narrower than that of a regional grain reserve operated by member State Governments. It is mainly devoted to servicing emergency response efforts in the region by WFP and its partners.[32]

55. In addition to these examples, regional grain reserves are at varying stages of negotiation in many regions.

56. In South Asia, the South Asian Association for Regional Cooperation (SAARC) began discussing the establishment of a regional grain reserve in 1988. In 2007, the group signed an agreement to create the regional SAARC Food Bank. The agreement committed the eight SAARC member States (Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka) to earmark a regional reserve of approximately 242,000 tons of grain, with India providing 150,000 tons. The size of the planned reserve was later increased to nearly 500,000 tons. The reserve is limited to an emergency response mandate and is triggered by a request from one member State to the others.[33] Despite being signed into force, the creation of the SAARC Food Bank has stalled, owing to hesitations among member states about the release of contributions to the Food Bank, its triggers and its maintenance.

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[30] ASEAN, "Eleventh AMAF-Plus-Three-Countries Conclude Agreement on Rice", *ASEAN Secretariat News* (2011). Available from www.asean.org/news/asean-secretariat-news/item/11th-amaf-plus-three-countries-conclude-agreement-on-rice.

[31] ASEAN Plus Three Emergency Rice Reserve, "How APTERR works". Available from www.apterr.org/index.php/how-apterr-works.

[32] Raul Balletto and Stephanie Wertheimer, "Emergency preparedness tools and activities in Latin America and the Caribbean", in *Revolution: From Food Aid to Food Assistance: Innovations in Overcoming Hunger*, Steven Were Omamo, Ugo Gentilini and Susanna Sandström, eds. (Rome, World Food Programme, 2010), pp. 275-294. Available from http://home.wfp.org/stellent/groups/public/documents/newsroom/wfp225646.pdf.

[33] SAARC, Agreement on establishing the SAARC Food Bank. Available from www.saarc-sec.org/userfiles/FoodBank.doc.

57. In Africa, the Southern African Development Community (SADC) member States (Angola, Botswana, the Democratic Republic of the Congo, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, the United Republic of Tanzania, Zambia and Zimbabwe) have been discussing the creation of a regional food reserve since the 1980s. In 2000-2001, they designed the initial plan for the Regional Food Reserve Facility. To date, the plan calls for an ambitious set of objectives, including price stabilization and emergency response. The reserve would have 500,000 tons of food. SADC has completed the initial exploratory phases of the Reserve Facility, but its implementation has stalled prior to the feasibility stage, owing to disagreements among member States about the reserve's cost and the breadth of its mandate.[34]

58. The most recent regional reserve initiative involves the Economic Community of West African States (ECOWAS). In 2009, IFPRI and the World Bank proposed that ECOWAS implement a reserve system called Pre-Positioning for Predictable Access and Resilience, aiming to (a) cover initial 30 days of food needs in the event of an emergency, and (b) raise a budget that would enable the group of countries to trade on the futures market in order to adjust prices and/or procure an additional 60 days of food needs. The reserve system would be triggered by volatility on the international commodity markets, not by a Government request or by a natural disaster. Lastly, non-governmental organizations have highlighted the value of village grain banks in countries such as Burkina Faso, Mali and the Niger, arguing that they offer the benefit of an immediate response in the event of a food shortage.

59. The effectiveness of physical grain reserves depends on a number of factors, including their management and cost. Given the recurrence of food crises, this issue is expected to remain prominent as one among many possible solutions to extreme food price instability. UNCTAD and its partners should continue to monitor its development in order to provide relevant advice to net-food importing countries exposed to the vagaries of extreme commodity price volatility.

IV. Concluding remarks

60. The factors that contributed to engendering high commodity price volatility over the period covered include traditional supply and demand factors, such as the weather, demographic factors and changing consumption patterns in emerging economies. However, these have been exacerbated by financialization of commodities which has spawned increased speculation, as illustrated by the dramatic increase in speculative investment in commodity indices.

61. The international community has responded by adopting a number of initiatives aimed at addressing the negative effects of excessive price volatility on vulnerable groups. AMIS, the High-level Task Force on the Global Food Security Crisis, the Global Agriculture and Food Security Programme and the Zero Hunger Challenge are targeted at the agricultural and food sectors. Improvements to JODI-oil and the creation of JODI-gas are focused on countering excessive price volatility in energy markets. There is also a revived interest in the constitution of regional

[34] J. K. Rwelamira, SADC Regional Food Reserve Facility, seminar on a framework for the establishment of a regional food reserve facility, presented at the National Agricultural Marketing Council, Pretoria, 27 March 2009.

grain reserves in the aftermath of the 2008 food crisis and subsequent threats to food security. It is important, however, to note that these new proposals for grain reserves are different from buffer stocks, and their main objective is not to stabilize prices, but to enhance access to food (particularly for vulnerable groups) in situations of excessive price volatility where markets have collapsed, as in the 2008 crisis. Furthermore, proponents have been at pains to emphasize the need for a clearly developed trigger mechanism and an objective definition of the conditions under which the trigger could be activated, as well as the need to ensure that the reserves are professionally managed in a manner that assures good quality grains and keeps cost low.

62. The international community, including UNCTAD and other stakeholders, could contribute actively to building consensus on the relevance of grain reserves in order to ensure that vulnerable groups are sufficiently catered to during severe shocks to food markets in the future.